EXHIBIT I

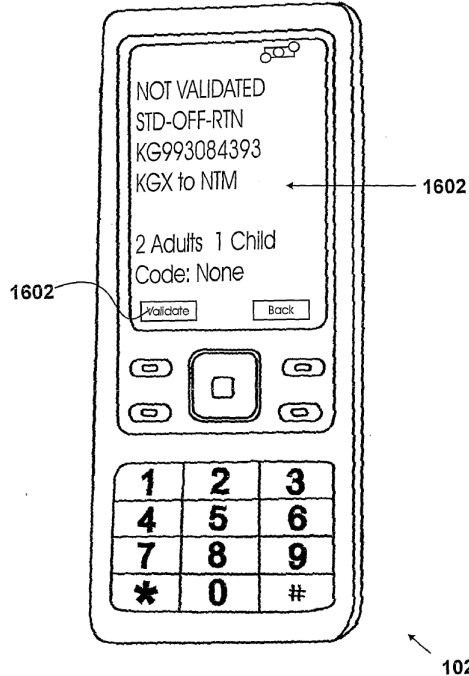**Invalidity Chart for U.S. Patent No. 9,239,993**

U.S. Patent No. 9,239,993		WO 2009/141614 Al to TERRELL, Alexander Published November 26, 2009
Claim 1	**Claim 8**	***Terrell* anticipates claim 1 of the '993 patent**
[A] A method performed by a computer system for displaying visual validation of the possession of a previously purchased electronic ticket for utilization of a service monitored by a ticket taker comprising:	[A] A system for validating previously purchased electronic tickets for utilization of a service monitored by a ticket taker, comprising: a central computer system and at least one remote display device operatively connected to the central computer system over a data communication network, wherein the central computer system:	"a method of electronic ticketing in which the image is displayed by a mobile device that is eye-readable for inspection purposes." (Ex. 1010, p. 20, ln 1-2)

"request, from the server 101, the validation of a ticket having a specific unique ticket number… the server responds by assembling the required data, including… code for the day." (*Id*. at p. 18, ln 29 - p. 19, ln 1)

Moreover, *Terrell*'s electronic ticketing method includes a server that is configured to "supply ticket specific data defining a ticket to said mobile device including a ticket expiry time, such that at said mobile device: said mobile device (I) displays graphical information comprising textual information and animated graphics." (*Id*. at p. 2, ln 24-27).

More specifically, *Terrell* discloses that "a user, such as user 105 of mobile device 102 will wish to purchase a ticket (such as a ticket for travel or an event or a voucher for goods or services). Having bought such a ticket, it will often be necessary for the ticket to be shown to another person 106 for inspection. For example, the ticket in the case of a rail ticket will need to be shown to a guard 106 at a station or on a train." (*Id*. at p. 4, ln 8-13).

"a person such as… ticket inspector can |

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		easily, by viewing the code for the day 1107 and/or the decrementing timer 1104 observe that the ticket appears to be a valid ticket." (*Id*. at p. 13, ln 18-20) *Terrell*'s disclosure of an "eye-readable" image on a mobile ticketing method discloses the "visual validation" recited in the '993 patent.
[B] transmitting a token associated with a previously purchased electronic ticket to a remote display device,	[B] transmits a token associated with the previously purchased electronic ticket to the at least one remote display device,	 *Figure 16* In Figure 16, *Terrell* teaches a token ("KG993084393"), which includes the first two letters of the source terminal followed by a ten-digit number. *Terrell* describes Figure 16 as follows: "In the above-described embodiment, it is envisaged that validated tickets will always be supplied to the mobile devices. However, in an alternative embodiment the ticket is provided to the mobile device in a non-

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		validated form, and is validated in a separate transaction initiated by the user. This embodiment is used for the case where the ticket is not for immediate travel. For example, a rail journey ticket may be valid for thirty days from purchase and this ticket will be provided in a non-validated form to the mobile device. When the user wants to use the ticket (for example, just before boarding the train). The user validates the ticket. As another example, the user may purchase a set of tickets (often called a carnet). The user receives all of the tickets in a non-validated form and validates them individually one by one, as required." (*Id.* at p. 18, ln 7-18). Moreover, *Terrell* clearly specifies "said ticket specific data is delivered in a non-validated form." (*Id.* at p. 21, ln 7-8). "Thus, at step 1304 the mobile device accepting the offer of sale of a ticket is provided with a ticket having a unique ticket number, and the details of the ticket, along with the unique identification number are logged at step 1305." (*Id.* at p. 16, ln 5-8) *Terrell* discloses a nonvalidated ticket that is supplied from a server to a mobile device (i*d.* at p. 18, ln 17-18; p. 18, ln 27 - p. 19, ln 5) and that nonvalidated ticket has a unique ticket number supplied after purchase (*id.* at p. 16, ln 5-8).
[C] wherein the token is a unique alphanumeric string, and	[C] wherein the token is a unique alphanumeric string, and	"a ticket having a unique ticket number, and the details of the ticket, along with the unique identification number" (*Id.* at p. 16, ln 5-8) As such, *Terrell* shows in Figure 11 that the

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		unique identification number 1106 is an alphanumeric string (e.g., YR74938493). (*Id*. at p. 13, ln 8-9; Figure 11)
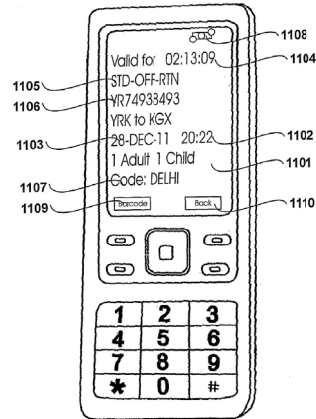

Figure 11

In addition, in Figure 16 *Terrell* teaches a token ("KG993084393"), which is different from the token illustrated in the Figure 11 and includes the first two letters of the source terminal followed by a ten-digit number.
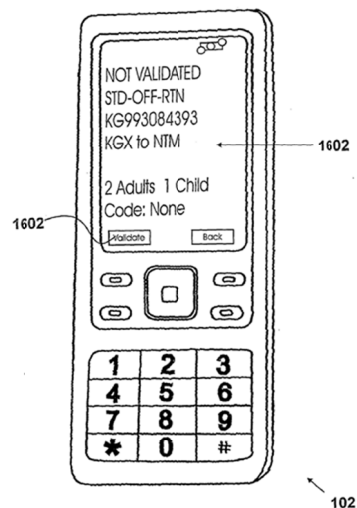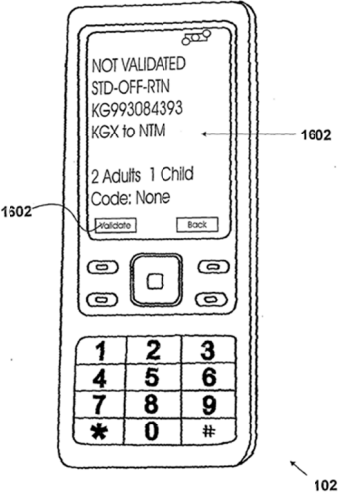

Figure 16

One skilled in the art would understand a |

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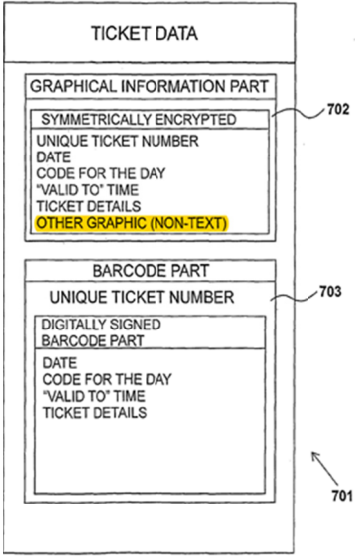|		
		"unique ticket number" or a "unique identification number" to disclose the recitation of "the token is a unique alphanumeric string."
[D] wherein a copy of the unique alphanumeric string is stored on a central computer system;	[D] wherein a copy of the unique alphanumeric string is stored on the central computer system;	"The tickets supplied by the server 101 to the mobile devices such as device 102 each comprise a unique ticket number, along with other details, as will be described below. Details of the tickets sold, including the unique ticket number, are stored in the verification database." (*Id*. at p. 5, ln 1-4) One skilled in the art would understand that *Terrell* discloses storing the unique ticket number supplied by the server to the mobile phone into a verification database.
[E] validating the token	[E] and upon a request received in the at least one remote display device, validates the token associated with the previously purchased electronic ticket	"In addition, in place of the button 1109 (shown in Figure 11) the nonvalidated ticket of Figure 16 has a validation button 1602 allowing the user of the mobile device to request, from the server 101, the validation of a ticket having a specified unique ticket number. Upon receiving the request the server responds by assembling the required data, including date, code for the day, "valid to" time, and generating the corresponding barcode data, as previously described. The assembled data and the barcode data are then transmitted to the requesting mobile device, so that the application can update the pre-validation ticket to a validated ticket (such as that shown in Figures 11 and 12)." (emphasis added) (*Id*. at p. 18, ln 27 – p. 19, ln 5) Additionally, *Terrell* discloses that "the ticket is provided to the mobile device in a non-validated form, and is validated in a separate transaction initiated by the user." (*Id*. at p. 18, ln 9-10)

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Figure 16

[F] by matching the token transmitted to the remote display device to the copy of the unique alphanumeric string stored on the central computing system	[F] by matching the token transmitted to the remote display device to the copy of the unique alphanumeric string stored on the central computing system	*Terrell* discloses storing the unique ticket number in a database after it is sold and delivered to the mobile device: "Details of the tickets sold, including the unique ticket number, are <u>stored in the verification database</u>." (*Id*. at p. 5, ln 3-4) "In addition, in place of the button 1109 (shown in Figure 11) the nonvalidated ticket of Figure 16 has a validation button 1602 allowing the user of the mobile device to request, from the server 101, the validation of a ticket having a specified unique ticket number. Upon receiving the request the server responds by assembling the required data, including date, code for the day, "valid to" time, and generating the corresponding barcode data, as previously described. The assembled data and the barcode data are then transmitted to the requesting mobile device, so that the application can update the pre-validation ticket to a validated ticket (such as that shown in Figures 11 and 12)." (*Id*. at p. 18, ln 27 – p. 19, ln 5)

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		Moreover, *Terrell* teaches that "[D]etails of the tickets sold, including the unique ticket number, are stored in the verification database." (*Id*. at p. 5, ln 3-4). *Terrell* specifically teaches this limitation as follows: "Where a database of the unique ticket numbers is available, this ticket number can also be checked against such a database to ensure that it is valid." (*Id*. at p. 14, ln 9-11) One skilled in the art would understand *Terrell* as disclosing verification of a ticket by matching the unique ticket number sent by the mobile phone to the unique ticket number stored in the verification database.
[G] to provide a ticket payload to the remote display device;	[G] to provide a ticket payload to the at least one remote display device;	*Terrell* discloses the server responding to the validation request by assembling and transmitting to the mobile device the ticket data (*Id*. at p. 18, ln 27 – p. 19, ln 5) The ticket data, according to *Terrell* "graphical information," which can be "presented as a human-readable information on the mobile device." (*Id*. at p. 9, ln 17-20) *Terrell* teaches that "receiving ticket specific data at a mobile device, said data defining graphical information comprising textual information and graphics to be animated." (*Id*. at p. 20, ln 5-7)
[H] securing a validation display object prior to transmission to provide a secured	[H]secures a validation display object prior to transmission to provide a secured	*Terrell* discloses ticket details such as graphical information being encrypted using the symmetric data encryption key. (*Id*. at p. 9, ln 25-28) In particular, *Terrell* teaches in Figure 7 that the "GRAPGICAL INFORMATION

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validation display object;	validation display object;	PART," which is included in the "TICKET DATA", is symmetrically encrypted.
		  Figure 7 One skilled in the art would understand that *Terrell* discloses the use of encryption to secure the validation display object prior to transmission in light of the disclosure. One skilled in the art would additionally understand that a wide variety of known encryption methods would be logical to protect transmission of valuable data such as the ticket data disclosed in *Terrell*.
[I] transmitting to the remote display device a secured validation display object associated with the ticket payload; and	[I] transmits to the remote display device over the data communication network the secured validation display object associated with the ticket	*Terrell* clearly discloses the server, upon a validating request, transmitting the ticket data including a validation display object over a communication network to the mobile device. (*Id.* at p. 18, ln 27 – p. 19, ln 5) For example, *Terrell* discloses that "the mobile device is able to communicate with the server 101 via the Internet." (*Id.* at p. 6, ln 16-17) Moreover, *Terrell* further discloses that

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	payload, and	"[T]e ticket data received from the server … comprises a graphical information part." (*Id.* at p. 9, ln 16-17) *Terrell* further specifies that "[T]he graphical information part comprises data that is to be presented as human-readable information on the mobile device display." (*Id.* at p. 9, ln 19-20)
[J] enabling the remote display device to display the secured validation display object upon validation of the token for visual recognition by the ticket taker or	[J] wherein the remote display device enables display of the secured validating display object upon validation of the token for visual recognition by the ticket taker or	*Terrell* in Figure 9 discloses displaying received graphical information at step 902 on the mobile device. (*Id.* at Figure 9)

Terrell in Figure 9 discloses displaying received graphical information at step 902 on the mobile device. (*Id.* at Figure 9)

Figure 9

Terrell teaches that "receiving ticket specific data at a mobile device, said data defining graphical information comprising textual information and graphics to be animated." (*Id.* at p. 20, ln 5-7)

Furthermore, *Terrell* discloses that tickets "provided by a wireless application server to mobile devices" will be shown "to the bus driver, and possibly a ticket inspector

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		who boards the bus for the purpose of checking and validating tickets." (*Id*. at p. 4, ln 5-6, ln 14-16) One skilled in the art would understand that *Terrell* discloses enabling the remote display device to display the secured validation display object after the token has been verified and the ticket package has been delivered.
[K] preventing the remote display device from displaying the secured validation display object in the event that the token is not validated.	[K] prevents the remote display device from displaying the secured validation display object in the event that the token is not validated.	*Terrell* provides a validation button on the user's mobile device that allows the user to request a validation of the non-validated ticket and upon the server validating the ticket with a specified unique ticket number, updating on the mobile device the pre-validation ticket to a validated ticket. (*Id*. at p. 18, ln 27 – pg. 19, ln 5) Additionally, *Terrell* discloses: "An example of a non-validated ticket 1601 is shown displayed on mobile device 102 in Figure 16. The graphical information part of the ticket, shown in Figure 16 is similar to that of a valid ticket but does not show the 'valid to' time 1102 (as shown in Figure 11). Instead, the words 'not validated' are displayed. Also, as the 'valid to' time was not included in the ticket data the displayed graphical information also does not show a decrementing 'valid for' time. Furthermore, the ticket does not include a date or corresponding 'code for the day'." (*Id*. at p. 18, ln 19-26) *Terrell* specifically discloses this limitation as follows: "Where a database of the unique ticket numbers is available, this ticket number can also be checked against such a database to ensure that it is valid.

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	Furthermore, as mentioned previously, such an inspection of the unique ticket number may also be logged on the verification database 111 by the server 101. Thus, if two separate uses of the ticket are logged, this may be identified by the server 101 and the ticket's further use may be blocked." (*Id*. at p. 14, ln 9-17) One skilled in the art would understand that the non-validated tickets as disclosed by *Terrell* are prevented from displaying the secured validation display object as the secured validation display object is only delivered to the mobile device after a successful validation.

U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 2	***Terrell* anticipates claim 2 of the '993 patent**
[A] The method of claim 1 further comprising: receiving from the remote display device a request to verify the purchase of the previously purchased electronic ticket;	"In addition, in place of the button 1109 (shown in Figure 11) the nonvalidated ticket of Figure 16 has a validation button 1602 allowing the user of <u>the mobile device to request, from the server 101, the validation of a ticket having a specified unique ticket number</u>. Upon receiving the request the server responds by assembling the required data, including date, code for the day, "valid to" time, and generating the corresponding barcode data, as previously described. The assembled data and the barcode data are then transmitted to the requesting mobile device, so that the application can update the pre-validation ticket to a validated ticket (such as that shown in Figures 11 and 12)." (*Id*. at p. 18, ln 27 – p. 19, ln 5)

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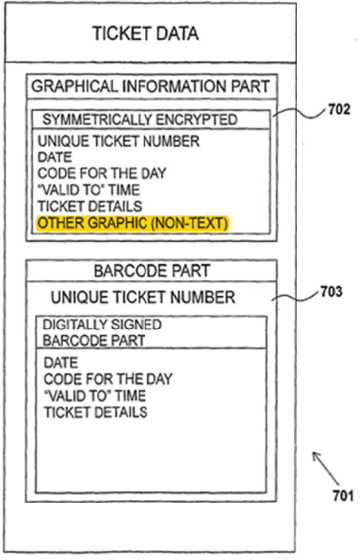|	
[B] determining the validity of the received request; and	*Terrell* discloses the server receiving a request from the mobile device to verify a unique ticket number and in response to generate a ticket package to return to the mobile device (*Id.*) *Terrell* discloses "[W]here a database of the unique ticket numbers is available, this ticket number can also be checked against such a database to ensure that it is valid." (*Id.* at p. 14, ln 9-11) One skilled in the art would understand *Terrell* as teaching "determining the validity of the received request."
[C] transmitting a response to the remote display device confirming the verification of the previously purchased electronic ticket by displaying the secured validation display object on the remote display device.	*Terrell* discloses the server receiving a request from the mobile device to verify a unique ticket number and in response to generate a ticket package to return to the mobile device (*Id.* at p. 18, ln 27 – p. 19, ln 5) This request includes graphical information including items such as the code of the day. (*Id.*) *Terrell* teaches "receiving ticket specific data at a mobile device, said data defining graphical information comprising textual information and graphics to be animated." (*Id.* at p. 20, ln 5-7) *Terrell* discloses "[A]n apparatus for electronic ticketing, comprising a wireless application server and a database, wherein said wireless application server is configured to: supply ticket specific data defining a ticket to said mobile device including a ticket expiry time, such that at said mobile device." (*Id.* at p. 22, ln 19-20)

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U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 3	**Terrell anticipates claim 3 of the '993 patent**
[A] The method of claim 2 further comprising: transmitting the validation display object to the remote display device prior to receiving the request for verification.	*Terrell* discloses: "In an alternative embodiment, normally reserved for blocks of lower value tickets, the validation process is performed by the mobile device, without communication with the server". (*Id*. at p. 19, ln 6-7) *Terrell* teaches "[A] method of electronic ticketing in which an image is displayed by a mobile device that is eye-readable for inspection purpose, comprising the steps of: receiving ticket specific data at a mobile device, said data defining graphical information comprising textual information and graphics to be animated." (*Id*. at p. 20, ln 1-7) *Terrell* further discusses "[T]he method of any one of claims 1 to 4, wherein said ticket specific data is received in a non-validated form such that a non-validated ticket is displayed." (*Id*. at p. 20, ln 1 – p. 21, ln 2) *Terrell*, therefore, teaches verification in embodiments communicating with the server (*id*. at p. 18, ln 27 – p. 19, ln 5) and embodiments wherein the verification is done on the mobile device (*id*. at p. 19, ln 6-7). It further discloses embodiments wherein the validation display object is transmitted to the phone post-verification (*id*. at p. 18, ln 27 – p. 19, ln 5) as well as embodiments wherein the validation display object is transmitted to the phone pre-verification (*id*. at p. 19, ln 6-7). One skilled in the art would understand that

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	Terrell discloses that either the server or the mobile phone may serve to verify the electronic ticket. One skilled in the art would also understand that for the mobile device to perform the validation, the entire ticket package must already be on the phone prior to validation. One skilled in the art would understand, in light of *Terrell*, that the validation display object could be transmitted to the phone prior to a request for verification as recited in claim 3.

U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 4	***Terrell* anticipates claim 4 of the '993 patent**
[A] The method of claim 3 further comprising: securing the validation display object prior to transmission of the validation display object against being displayed on the remote display device when the previously purchased electronic ticket has not been verified.	*Terrell* discloses an embodiment wherein the ticket package is on the mobile device prior to validation. (*Id*. at p. 19, ln 6-7) *Terrell* discloses "The fact that the graphical information part of the ticket data is encrypted means that if the ticket data becomes intercepted during its transmission, it cannot be used to create a copy of the ticket unless the person intercepting has knowledge of the symmetric key." (*Id*. at p. 17, ln 10-14) In particular, *Terrell* teaches in Figure 7 that the "GRAPGICAL INFORMATION PART," which is included in the "TICKET DATA" is symmetrically encrypted.

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Figure 7

One skilled in the art would understand that the encryption of the graphical information part of the ticket as disclosed in *Terrell* would comprise "securing the validation display object prior to transmission" as recited in claim 4. One of skill in the art would understand that the methodology as disclosed in *Terrell* encompasses the securing of the validation display object to prevent display prior to validation.

U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 5	***Terrell* anticipates claim 5 of the '993 patent**
[A] The method of claim 4 wherein the securing step is comprised of: encrypting the validation display object.	*Terrell* discloses the ticket data being "digitally signed using a private authentication key of an asymmetric (public) key pair." (*Id.* at p. 17, ln 15-23) *Terrell* further discloses the validated ticket sent to the mobile phone may include a visually validating element "[f]or the purposes of speed and economy, at times it may

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	preferable for such a ticket inspection to be merely done by the inspector's eyes." (*Id*. at p. 4, ln 10-17) *Terrell* further discloses that "… the data in the graphical information part of the ticket data is encrypted using the symmetric data encryption key that was first generated by the mobile device itself." (*Id*. at p. 9, ln 26-28) It would be clear to a person of skill in the art that *Terrell* discloses graphical ticket information that includes a visual element that is encrypted by the server and decrypted by the mobile device. The '993 patent does not disclose any detailed description of encryption technology but rather relies on existing technologies and methodologies. A person skilled in the art would recognize that the encryption methodologies as disclosed in *Terrell* encompasses the encryption of the transmitted ticket data, which may include validation display object as recited in claim 5 since encrypting transmitted and stored data has been well understood in the art prior to the '993 patent.

U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 6	**Terrell anticipates claim 6 of the '993 patent**
[A] The method of claim 1 further comprising: transmitting security data to the remote display device to authenticate the secured validation display object.	*Terrell* discloses the ticket data being "digitally signed using a private authentication key of an asymmetric (public) key pair." (*Id*. at p. 10, ln 4-5) *Terrell* discloses "the data in the graphical information part of the ticket data is encrypted using the symmetric data

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<table>
<tr>
<td></td>
<td>encryption key that was first generated by the mobile device itself." (*Id*. at p. 9, ln 26-28)

Terrell further discloses "Consequently, at step 302 the mobile device 102 receives the application, along with a public encryption key that is for subsequent asymmetric encryption." (*Id*. at p. 6, ln 7-9)

Claim 13 of *Terrell* recites: "The method of anyone of claims 1 to 12, wherein said means of authentication comprises data within said graphical code that is digitally signed using a private asymmetric key."

The '993 patent does not disclose any detailed description of encryption technology but rather relies on existing technologies and methodologies. One skilled in the art would understand that the public key sent by the server to the mobile device would comprise "security data" that is utilized to authenticate and decode the "graphical code that is digitally signed using a private asymmetric key". A person skilled in the art would recognize that the encryption methodologies as disclosed in *Terrell* encompass the transmission of security data to the remote display device to authenticate the secured validation display object.</td>
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U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 7	***Terrell* anticipates claim 7 of the '993 patent**
[A] The method of claim 1 where the securing step is comprised of: encrypting the secured validation display object.	*Terrell* clearly discloses encrypting the ticket data package prior to transmission to the mobile device. (*Id*. at p. 10, ln 4-5)

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	In particular, Terrell teaches in Figure 7 that the "GRAPGICAL INFORMATION PART," which is included in the "TICKET DATA" is symmetrically encrypted. *Figure 7*

U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 9	**Terrell anticipates claim 8 of the '993 patent**
[A] The system of claim 8 wherein the secured validation display object is not displayable without verification of the previously purchased electronic ticket.	"An example of a non-validated ticket 1601 is shown displayed on mobile device 102 in Figure 16. The graphical information part of the ticket, shown in Figure 16 is similar to that of a valid ticket but does not show the 'valid to' time 1102 (as shown in Figure 11). Instead, the words 'not validated' are displayed. Also, as the 'valid to' time was not included in the ticket data the displayed graphical information also does not show a decrementing 'valid for' time. Furthermore, the ticket does not include a date or corresponding 'code for the day'." (*Id.* at p.

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	18, ln 19-26) One skilled in the art would understand that the non-validated tickets as disclosed by *Terrell* are not displayable as the secured validation display object is only delivered to the mobile device after a successful validation. *Terrell* specifically discloses this limitation as follows: "Where a database of the unique ticket numbers is available, this ticket number can also be checked against such a database to ensure that it is valid. Furthermore, as mentioned previously, such an inspection of the unique ticket number may also be logged on the verification database 111 by the server 101. Thus, if two separate uses of the ticket are logged, this may be identified by the server 101 and the ticket's further use may be blocked." (*Id*. at p. 14, ln 9-17)

U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 10	***Terrell* anticipates claim 10 of the '993 patent**
[A] The system of claim 9 wherein the secured validation display object is secured by encryption means.	*Terrell* discloses ""As previously mentioned, in one embodiment a part of the symmetric key comprises a selected part of the IMEI number of the requesting mobile device. In this embodiment, when the ticket is received back at the requesting mobile device, the application resident on the receiving mobile device ensures that the selected part of its IMEI number is present in the symmetric key. If it is not present then the decryption of the graphical information part of the ticket data is blocked. " (*Id*. at p. 17, ln 15-23) *Terrell* further discloses the validated ticket sent to

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	the mobile phone may include a visually validating element "[f]or the purposes of speed and economy, at times it may preferable for such a ticket inspection to be merely done by the inspector's eyes." (*Id.* at p. 4, ln 10-17) It would be clear to a person of skill in the art that *Terrell* discloses graphical ticket information that includes an animated element that is encrypted by the server and decrypted by the mobile device. The '993 patent does not disclose any detailed description of encryption technology but rather relies on existing technologies and methodologies. A person skilled in the art would recognize that the encryption methodologies as disclosed in *Terrell* encompass the encryption of the transmitted ticket data, which may include validation display object. as recited in claim 10 since encrypting transmitted and stored data has been well understood in the art prior to the '993 patent.

U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 11	***Terrell* anticipates claim 11 of the '993 patent**
[A] The system of claim 9 wherein the remote display device receives and stores the secured validation display object prior to verification of the purchase of the previously purchased electronic ticket.	*Terrell* discloses: "In an alternative embodiment, normally reserved for blocks of lower value tickets, the validation process is performed by the mobile device". (*Id.* at p. 19, ln 6-7)

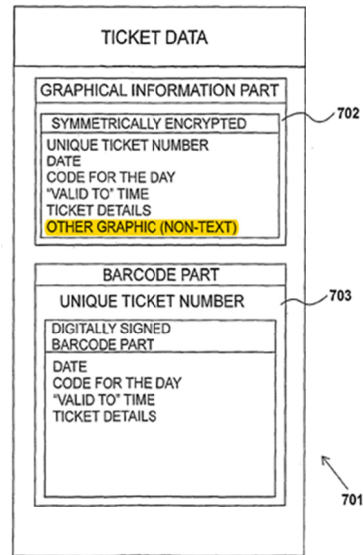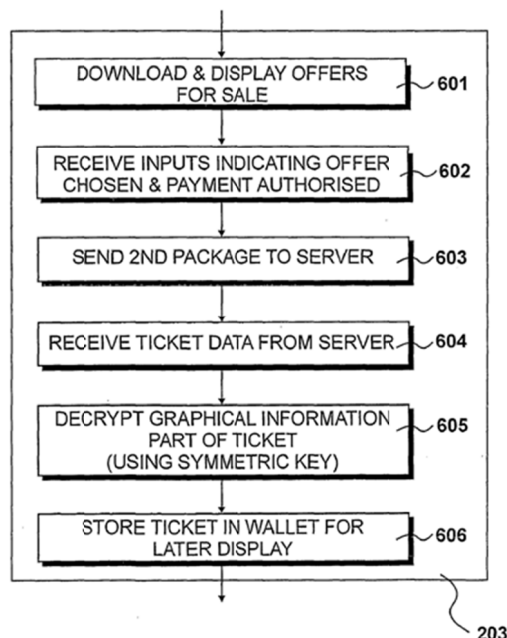**Invalidity Chart for U.S. Patent No. 9,239,993**

Figure 7

With regard to this claim limitation, *Terrell* teaches "said ticket specific data is delivered in a non-validated form, and validation of said ticket specific data is executed in a second step initiated by a user of the mobile device, in which additional information required to provide validation is generated by said application without reference to any system external to said mobile device." (*Id.* at p. 21, ln 1-7)

Terrell specifies "receiving ticket specific data at a mobile device, said data defining graphical information comprising textual information and graphics to be animated." (*Id.* at p. 20, ln 1-7) |

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Terrell further discloses "[A]t step 606 the ticket data is stored in a wallet (folder) for later display of the ticket." (*Id*. at p. 9, ln 13-14)

Terrell, therefore, teaches verification in embodiments communicating with the server (*id*. at p. 18, ln 27 – p. 19, ln 5) and embodiments wherein the verification is done on the mobile device (*id*. at p. 19, ln 6-7). It further discloses embodiments wherein the validation display object is transmitted to the phone post-verification (*id*. at p. 18, ln 27 – p. 19, ln 5) as well as embodiments wherein the validation display object is transmitted to the phone pre-verification (*id*. at p. 19, ln 6-7).

One skilled in the art would understand that *Terrell* discloses that either the server or the mobile phone may serve to verify the electronic ticket. One skilled in the art would also understand that for the mobile device to perform the validation, the entire ticket |

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	package must already be on the phone prior to validation. One skilled in the art would understand, in light of *Terrell*, that the validation display object could be transmitted to the phone prior to a request for verification as recited in claim 11.

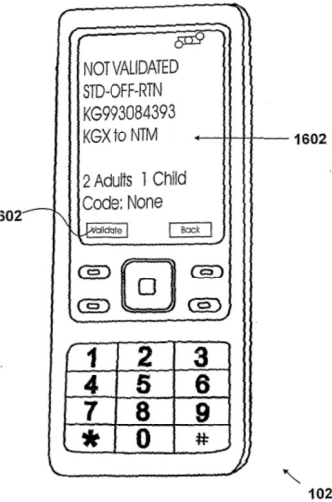| U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 12	***Terrell* anticipates claim 12 of the '993 patent**
[A] The system of claim 11 wherein the remote display device is further configured to display the secured validating display object without a network connection with the central computer system.	*Terrell* discloses an embodiment wherein the mobile device acts alone to validate a display the electronic ticket. One skilled in the art would understand that a validation performed solely on the mobile device would not require a network connection with the central computer system. (*Id*. at p. 19, ln 6-7) With regard to this claim limitation, *Terrell* teaches "said ticket specific data is delivered in a non-validated form, and validation of said ticket specific data is executed in a second step initiated by a user of the mobile device, in which additional information required to provide validation is generated by said application without reference to any system external to said mobile device." (*Id*. at p. 21, ln 1-7) *Terrell* specifies "receiving ticket specific data at a mobile device, said data defining graphical information comprising textual information and graphics to be animated." (*Id*. at p. 20, ln 1-7)

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Claim 13	***Terrell* anticipates claim 13 of the '993 patent**
[A] The system of claim 8 wherein the remote display device displays the secured validating display object without a network connection with the central computer system.	*Terrell* discloses an embodiment wherein the mobile device acts alone to validate a display the electronic ticket. (*Id*. at p. 19, ln 6-7)

With regard to this claim limitation, *Terrell* teaches "said ticket specific data is delivered in a non-validated form, and validation of said ticket specific data is executed in a second step initiated by a user of the mobile device, in which additional information required to provide validation is generated by said application without reference to any system external to said mobile device." (*Id*. at p. 21, ln 1-7)

Terrell specifies "receiving ticket specific data at a mobile device, said data defining graphical information comprising textual information and graphics to be animated." (*Id*. at p. 20, ln 1-7)

Terrell further specifies "said mobile device (i) displays graphical information comprising textual information and animated graphics on said viewable screen for visual inspection." (*Id*. at p. 22, ln 21-23)

One skilled in the art would understand that a validation performed solely on the mobile device would not require a network connection. |

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Claim 14	***Terrell* anticipates claim 14 of the '993 patent**
[A] The system of claim 13 wherein the secured validation display object is further comprised of data parameters that are configured to be used by the remote display device to perform the purchase validation.	"As previously mentioned, in one embodiment a part of the symmetric key comprises a selected part of the IMEI number of the requesting mobile device. In this embodiment, when the ticket is received back at the requesting mobile device, the application resident on the receiving mobile device ensures that the selected part of its IMEI number is present in the symmetric key." (*Id*. at p. 17, ln 15-19) One skilled in the art would understand that the IMEI number of the mobile device would comprise "data parameters" that are used in *Terrell* to secure the validation display object as well as perform the purchase as recited in claim 14.

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Claim 15	***Terrell* anticipates claim 15 of the '993 patent**
[A] The system of claim 8 wherein the secured validation display object is further configured to change based on a user of the remote display device actuating the user interface of the remote display device in a predetermined manner.	"the nonvalidated ticket of Figure 16 has a validation button 1602 allowing the user of the mobile device to request, from the server 101, the validation of a ticket having a specified unique ticket number." (*Id*. at p. 18, ln 27-30) "In an alternative embodiment, normally reserved for blocks of lower value tickets, the validation process is performed by the mobile device, without communication with the server." (*Id*. at p. 19, ln 6-8)

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<table>
<tr>
<td></td>
<td>"animate said graphics on said screen for visual inspection" (Id. at claim 1)

Figure 16

One skilled in the art would understand that by pressing the activation and in response the remote device displaying an animated graphic as taught by Terrell would comprise a secure validation display object changing in response to a user's touch. One skilled in the art would understand that the validation button as taught by Terrell, used to retrieve and animate the visual validation display object, teaches the elements as recited in claim 15.</td>
</tr>
</table>

U.S. Patent No. 9,239,993	WO 2009/141614 Al to TERRELL, Alexander
Claim 16	***Terrell* anticipates claim 16 of the '993 patent**
[A] The system of claim 15 wherein the predetermined manner of actuation is the user touching a predefined area of a display screen on the remote display device.	One skilled in the art would understand that the validation button taught by *Terrell* would encompass "the user touching a predefined area of a display screen" as recited in claim 16 and therefore teach all of the recitations of claim 16. (*Id*. at p. 18, ln 27-30; p. 19, ln 6-8; figure 16)

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Claim 17	***Terrell* anticipates claim 17 of the '993 patent**
[A] The system of claim 16 wherein the predefined area of the display screen appears as a button.	*Terrell* clearly teaches a validation button as recited in claim 17 and therefore teaches all of the recitations of claim 17. (*Id*. at p. 18, ln 27-30; p. 19, ln 6-8; figure 16)

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Claim 22	***Terrell* anticipates claim 22 of the '993 patent**
[A] The system of claim 8 wherein the secured validation display object is further configured to display in different versions of appearance where the selection of version is dependent on a pre-determined schedule.	"Specifically, the application requires at least one graphic element to be animated. That is, at least one graphic element must have a change in appearance, such as by movement, change in form, change in colour, change in size, etc. It may be noted that in the present embodiment the graphical information includes an animated graphical element in the form of a decrementing timer and two interchanging logos that move across the top of the screen." (*Id*. at p. 10, ln 26 – p. 11, ln 3) One skilled in the art would understand that the *Terrell* discloses a validation display object that has a different version of appearance dependent on a pre-determined schedule as recited in claim 22.

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Claim 23	***Terrell* anticipates claim 23 of the '993 patent**
[A] The system of claim 8 wherein the central computer system transmits the secured validating display object to the remote display device in dependence on completion of a purchase of the previously purchased electronic ticket.	*Terrell* discloses: "In an alternative embodiment, normally reserved for blocks of lower value tickets, the validation process is performed by the mobile device" (*Id*. at p. 19, ln 6-7) One skilled in the art would understand that *Terrell* discloses that either the server or the mobile phone may serve to verify the electronic ticket. One skilled in the art would also understand that for the mobile device to perform the validation, the entire ticket package must already be on the phone prior to validation. One skilled in the art would understand that the *Terrell* discloses a transmission of the validating display object in dependence of completion of purchase as recited in claim 23.

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Claim 24	***Terrell* anticipates claim 24 of the '993 patent**
[A] The system of claim 8 wherein the secured validation display object is configured to be unique to a specific remote display device it is intended to be displayed on.	"As previously mentioned, in one embodiment a part of the symmetric key comprises a selected part of the IMEI number of the requesting mobile device. In this embodiment, when the ticket is received back at the requesting mobile device, the application resident on the receiving mobile device ensures that the selected part of its IMEI number is present in the symmetric key." (*Id*. at p. 17, ln 15-19) One skilled in the art would understand that

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	the *Terrell* discloses a transmission of the ticket package incorporating an IMEI number specific to an individual mobile device making it "unique to a specific remote display device" as recited in claim 24.